

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

- Claim 1. (Currently Amended): A method to utilize the energy released by the molten aluminum-water reaction to do useful work by creating a dual explosion in a medium to which desired mechanical effects are to be created comprising the following steps:
- a) placing in the presence of water a detonable or combustible explosive device in the said medium, the said explosive device being capable of ~~producing~~converting aluminum powder to aluminum in its molten state to react with water; and,
 - b) actuating the said explosive device to initiate the first of the said dual-explosion which is a detonation or combustion of the said explosive device, creating mechanical effects in the said medium and releasing aluminum in its molten state, wherein the molten aluminum then reacts with water to create a second explosion of the said dual-explosion, enhancing or modifying the mechanical effects created by the said first explosion.
- Claim 2. (Previously Presented): The method of claim 1 wherein the said medium to which the desired mechanical effects are to be created is one chosen from the group consisting of: water, rock stratum, concrete, steel casing in an oil well, steel tubing in an oil well, steel casing in a gas well, steel casing in an oil well, hydrocarbon bearing formation or, coal seam, and a target of any material to be attacked.

Claim 3. (Previously Presented): The method of claim 1 wherein the said mechanical effects in the said medium are the mechanical effects for which an explosive device is designed to achieve is one or a combination chosen from the group of effects consisting of: pressure wave generation, pressure wave propagation, pressurization of medium, displacement of medium, target penetration, target piercing, target fracturing, crack initialization, crack propagation, medium disintegration, medium fragmentation and fragment movement.

Claim 4. (Currently Amended): ~~The method of claim 1~~ A method to utilize the energy released by a molten-metal water reaction to do useful work by creating a dual explosion in a medium to which desired mechanical effects are to be created comprising the following steps:

a) placing, in the presence of water, a detonable, or combustible explosive device in the said media, the said explosive device being capable of producing a light metal or its alloy wherein aluminum is substituted with a light metal or its alloy which also has a tendency to react with water in its molten state and release a substantial amount of thermal energy and hydrogen gas from the reaction, such light metal being one chosen from the group consisting of: magnesium, aluminum-magnesium alloy, aluminum-lithium alloy, and zirconium, and mixtures thereof; and

b) actuating said explosive device to initiate the first of the said dual explosion, which is a detonation or combustion of the explosive device, creating mechanical effects in the said medium in releasing said light metal or its alloy in its molten state, wherein the molten light metal or said alloy then reacts with water to create a second explosion of the said dual-explosion, enhancing or modifying the mechanical effects created by the said first explosion.

Claims 5-10 (Cancelled)

Claim 11. (New): The method of claim 4 wherein the said medium to which the desired mechanical effects are to be created is one chosen from the group consisting of: water, rock stratum, concrete, steel casing in an oil well, steel tubing in an oil well, steel casing in a gas well, steel casing in an oil well, hydrocarbon bearing formation or, coal seam, and a target of any material to be attacked.

Claim 12. (New): The method of claim 4 wherein the said mechanical effects in the said medium are the mechanical effects for which an explosive device is designed to achieve is one or a combination chosen from the group of effects consisting of: pressure wave generation, pressure wave propagation, pressurization of medium, displacement of medium, target penetration, target piercing, target fracturing, crack initialization, crack propagation, medium disintegration, medium fragmentation and fragment movement.